REMARKS

This Amendment is in response the Office Action mailed on June 13, 2007. Claims1 and 19 have been amended. Claims 14 and 36 have been canceled. Claims 1-13, 15-35 and 37-56 are pending. Reconsideration of the present application, in view of the above amendments and the following remarks, is respectfully requested.

Claims 1-56 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,193,397 to Tucker et al.

The present invention is directed to an infusion apparatus and a method of infusing medication as represented by the pending claims. The apparatus includes a medication reservoir and a carrier reservoir. By separating these two reservoirs the overall size of the implantable apparatus can be reduced because relatively high concentrated medication can be contained in one reservoir while the carrier fluid, for example saline, is contained in the carrier reservoir. In addition, the number of times the patient would need a refill of the medication can be reduced. To achieve this goal, the medication and the carrier must mix in a mixing chamber sufficiently to allow for dilution of the medication and carrier fluids so that the patient will receive the proper dose. As illustrated in Figures 4A and 4B, in one embodiment the mixing chamber is a microfluidic chip 128. The chip includes a pathway 134 that includes convolutions to allow the medication sufficient contact time with the carrier to allow for thorough mixing.

Independent claims 1 and 19 have been amended above to make it clear that the mixing chamber is a microfluidic chip. Tucker's mixing chamber 88 is "formed in a radially recessed portion 90 in the side wall of housing section 10a as best seen in FIG. 2" of Tucker (see Col. 7, lines 3-6 of Tucker). Thus, Tucker does not teach that the mixing chamber is a microfluidic chip, and therefore apparatus claims 1-13 and 14-40 are allowable.

Tucker discloses a basal reservoir containing medication of a certain dosage and a smaller bolus reservoir containing high concentrate medication. The basal reservoir discharges medication to the patient at a specified rate. The bolus reservoir discharges the high concentration of medication to a smaller accumulator and, at a specified time,

the accumulator discharges the bolus dose into the basal medication discharge. Thus, neither Tucker's bolus dose nor the basal dose contains a carrier fluid. Each contains medication. The bolus dose is sent as a short 'burst' of high concentration medication at timed or triggered intervals (such as mealtime). Tucker's apparatus delivers a burst of high concentration insulin to a diabetes patient to reduce a patient's blood sugar level, which normally rises after eating a meal. Thus, one skilled in the art would not be motivated to modify Tucker's apparatus to mix the high concentration bolus with the basal dose because to do so would go against Tucker's express teaching of delivering a burst of high concentration medication to the patient.

Independent claims 41 and 49 recite a method of infusing medication. Each requires the storing of a carrier in a carrier reservoir and storing a medication in a medication reservoir. As discussed above, Tucker does not teach storing a carrier in a carrier reservoir, and therefore, Tucker fails to anticipate claims 41-56. In addition, claims 41 and 49 recite mixing the medication with the carrier in the mixing chamber to dilute medication and form a medication/carrier mixture. As discussed above, Tucker's apparatus does not include a carrier and teaches away from diluting the bolus medication.

Should there be any remaining or further questions, the Examiner is requested to place contact the undersigned directly.

Respectfully submitted,

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